THE CLAIMS

1. (Previously presented) A method for detecting scintillator hysteresis artifacts in an image from an x-ray detector, said method including:

examining an image from an x-ray detector to measure a first signal level for a first area of interest and a second signal level for a second area of interest,

wherein said first area of interest includes a first image area and said second area includes a second image area;

determining a difference in said first signal level and said second signal level; and

comparing said difference to a threshold to detect a shape artifact from a prior image due to scintillator hysteresis, wherein said shape artifact results from an area of trapped electrical charge in a scintillator.

2. (Original) The method of claim 1, further including exposing said x-ray detector with a flat field x-ray exposure to produce said image.

3. (Original) The method of claim 1, wherein said first image area differs from said second image area.

4. (Original) The method of claim 1, wherein said detector includes a plurality of pixels, said plurality of pixels comprising a first set of pixels and a second set of pixels,

wherein said first set of pixels are examined to measure a first set of pixel signals and said second set of pixels are examined to measure a second set of pixel signals,

wherein said first signal level includes said first set of pixel image signals and said second signal level includes said second set of pixel image signals.

5. (Original) The method of claim 4, wherein said first set of pixels includes a first plurality of photodiodes, said first plurality of photodiodes measuring said first set of pixel signals and said second set of pixels includes a second plurality of photodiodes, said second plurality of photodiodes measuring said second set of pixel signals.

6. (Original) The method of claim 5, wherein said first set of pixel signals is measured by determining an amount of electrical charge discharged in said first plurality of photodiodes and said second set of pixel signals is determined by measuring an amount of electrical charge discharged in said second plurality of photodiodes.

7. (Original) The method of claim 4, wherein said threshold is a percentage of an average of a plurality of standard deviations of said first set of pixel image signals and said second set of pixel image signals.

8. (Original) The method of claim 1, further including:

irradiating said detector with an x-ray flux when said difference is greater than said threshold.

9. (Original) The method of claim 8, wherein said irradiating step is automatic.

10. (Original) The method of claim 2, further including:

irradiating said detector with an x-ray flux when said difference is greater than said threshold, wherein said x-ray flux is equivalent to said flat field x-ray exposure.

11. (Original) The method of claim 2, further including:

irradiating said detector with an x-ray flux when said difference is greater than said threshold, wherein said x-ray flux is greater than said flat field x-ray exposure.

12. (Previously presented) A system for detecting scintillator hysteresis artifacts in images from an x-ray detector, said system including:

an x-ray image including a first area of interest and a second area of interest,

wherein said first area of interest has a first signal level and said second area of interest has a second signal level;

readout electronics measuring said first signal level and said second signal level; and

a data acquisition system determining a difference between said first signal level and said second signal level,

wherein said difference is compared to a threshold to detect a shape artifact from a prior image due to scintillator hysteresis, wherein said shape artifact results from an area of trapped electrical charge in a scintillator.

13. (Original) The system of claim 12, further including an x-ray detector, wherein said detector is exposed to a flat field x-ray exposure to produce said image.

14. (Original) The system of claim 12, wherein said first area differs from said second area.

15. (Original) The system of claim 12, further including an x-ray detector exposed to an x-ray flux, said x-ray detector comprising a plurality of pixels, said pixels comprising a first set of pixels and a second set of pixels,

wherein said first set of pixels are examined to measure a first set of pixel signals and said second set of pixels are examined to measure a second set of pixel signals,

wherein said first signal level includes said first set of pixel image signals and said second signal level includes said second set of pixel image signals.

16. (Original) The system of claim 15, wherein said first set of pixels includes a first plurality of photodiodes and said second set of pixels includes a second plurality of photodiodes,

said first plurality of photodiodes measuring said first set of pixel signals and said second set of pixels includes a second plurality of photodiodes, said second plurality of photodiodes measuring said second set of pixel signals.

17. (Original) The system of claim 16, wherein said readout electronics measure said first set of pixel signals by scanning a first amount of electrical charge discharged in said first plurality of photodiodes and said second set of pixel signals by scanning a second amount of electrical charge discharged in said second plurality of photodiodes.

18. (Original) The system of claim 15, wherein said threshold is a percentage of an average of a plurality of standard deviations of said first set of pixel image signals and said second set of pixel image signals.

19. (Original) The system of claim 15, further including:

an x-ray flux source irradiating said detector with a second x-ray flux when said difference is greater than said threshold.

20. (Original) The system of claim 19, wherein said x-ray flux source automatically irradiates said detector.

21. (Original) The system of claim 13, further including:

an x-ray flux source irradiating said detector with a second x-ray flux when said difference is greater than said threshold, wherein said second x-ray flux is equivalent to said flat field x-ray exposure.

22. (Original) The system of claim 13, further including:

an x-ray flux source irradiating said detector with a second x-ray flux when said difference is greater than said threshold, wherein said second x-ray flux is greater than said flat field x-ray exposure.

23-24. (Cancelled)